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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/863,321

Filing Date: May 24, 2001

Appellant(s): HEUER, VOLKMAR

**David J. Cushing
For Appellant**

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12-26-2006 appealing from the Office action mailed
12-22-2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims 1-3 are rejected under 35 USC 102(e) for anticipation by Wakim (USP 6,477,178).

Claims 9-10 are allowed.

Claims 4-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

U.S. 6,477,178 B1

WAKIM ET AL.

11-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by **Wakim et al.** (U.S.6,477,178; hereinafter refer as '**Wakim**').

- In regard to claim 1, **Wakim** discloses in Figs. 1-2 and in the respective portions of the specification about the *system and method for transmitting, via the a synchronous digital transport network, frame-structured synchronous multiplex signal, composed of frames having the payload section and the overhead section, wherein the payload section comprises multiplex units that are multiplexed according the multiplex hierarchy* (For example see Figs. 1-2; Abstract; col.7, lines 30-42; col. 8, lines 19-35), *wherein the method comprises transmitting the frame of the frame-structured synchronous multiplex signal to be transmitted, including its unchanged overhead section, as payload in the concatenation of newly formed multiplex units* (“without terminating the synchronous path or associated overhead portions of the synchronous payload envelops ‘SPE’s”; For example see Figs. 1-2; col. 4, lines 55-61; col. 14, lines 6-8).

- Regarding claim 2, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), **Wakim** further discloses, *wherein the method further comprises creating a number of new multiplex units of the same size, and concatenating these new multiplex units form the virtual concatenation, packing the frame, including the overhead section thereof, in payload sections of the concatenated new multiplex units, creating the new frame and embedding the concatenated new multiplex units in the payload section and transmitting the new frame via the synchronous transport network* (For example see Figs. 1-2; col. 7, lines 30-42; col. 8, lines 19-35).

- In regard to claim 3, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), **Wakim** further discloses, *wherein the synchronous transport network is the SDH network, wherein the frames are synchronous transport modules of the type STM-N where N = 1, 4, 16 or 64, and wherein the multiplex units are virtual containers of the type VC-N where N = 11, 12, 2, 3, or 4 or contiguously concatenated virtual containers of the type VC-4-Nc where N = 4 or 16, and wherein the newly formed multiplex units are virtual containers of the type VC-N where N = 3 or 4* (For example see col. 7, lines 30-42; col. 8, lines 19-35; col. 14, lines 6-8).

(10) Response to Argument

1. In regard to claim 1,

a) Appellant mainly argued that Wakim does not teach “a frame-structured synchronous multiplex signal is composed of frames having a payload section and an overhead section, wherein the payload section comprises multiplex units that are multiplexed according to a multiplex hierarchy, and wherein a frame of the frame-structured synchronous multiplex signal, including its unchanged overhead section, is transmitted as payload in a concatenation of newly formed multiplex units.” (see pages 12-13, paragraph 3; page 14, paragraph 2). The examiner respectfully disagrees.

In Wakim (see figure 1), the SDH transport signal ‘SDH TS’ 22, 36 and 122 are transmitted through the SDH network 14, wherein the SDH TS can be a synchronous transport module level-4 ‘STM-4’ signal 350 (see figure 2; col. 7, lines 30-42) or concatenating with high

level concatenated signals STM-N such as STM-10, STM 16. etc. (see col. 8, lines 19-35). As disclosed figure 2, STM-4 350 is a “*frame-structured synchronous multiplex signal*”, which comprises a plurality of frames VC-3s, each VC-3 has its synchronous path and associated overhead portion 314 (claimed “*overhead section*”) and its payload portion 312 (claimed “*payload section*”); wherein the payload portion 312 comprises the mapping DS-3 signal (see col. 7, lines 12-42). It is well known in the art, DS-3 signal is comprised of three DS-1 signals (claimed “*multiplex units*”), which multiplex into a DS-3 signal, then into a VC-3, e.g. from a low level to a higher level in hierarchy. Frames, such as VC-3 with its payload and overhead section, are put together into the payload of STM-N signal, e.g. “*payload in a concatenation of newly formed multiplex units*”, without terminating their synchronous path and associated overhead section, e.g. “*including its unchanged overhead section*”, as specified in col. 4, lines 55-61; wherein STM-N signal are transmitted as an SDH transport signal over the SDH network as disclosed in figure 1 (claimed “*transmitting a frame of the frame-structured synchronous multiplex signal, including its unchanged overhead section, as payload in a concatenation of newly formed multiplex units.*”).

Therefore, Wakim does teach every single claimed limitation, “a frame-structured synchronous multiplex signal is composed of frames having a payload section and an overhead section, wherein the payload section comprises multiplex units that are multiplexed according to a multiplex hierarchy, and wherein a frame of the frame-structured synchronous multiplex signal, including its unchanged overhead section, is transmitted as payload in a concatenation of newly formed multiplex units.”

b) Appellant further argued that the examiner has not identified where the “overhead of the synchronous transport module” is placed (see page 13, paragraph 2, lines 1-3).

Nevertheless, the above argument is moot since such limitation “overhead of the synchronous transport module” is not recited in the rejected claim(s).

c) Appellant also argued that the virtual containers VC-3s in Wakim (also referred to as SPE’s) cannot be frames in the “frame-structured synchronous multiplex signal”, because they do not have (see page 13, paragraph 2; page 14, paragraph 2):

- 1) a structure of a frame.
- 2) payload section, which contains multiplex units that are multiplexed according to a multiplex hierarchy.

The examiner respectfully disagrees.

Regarding c1) above, in Wakim, the virtual containers VC-3s (also referred to as SPE’s) do have a structure of a frame, since each VC-3 310 (“*frame*”) includes a synchronous path and associated overhead portion 314 (“*overhead section*”) and a payload 312 (“*payload section*”) as disclosed in figure 2; col. 7, lines 12-15. Note that, in the present application, it is disclosed that a “*frame having a payload section and an overhead section*”. Since the VC-3 310 includes a payload portion 312 and overhead portion 314; therefore, the VC-3 does have a structure of a frame.

Regarding c2) above, since each DS-3 signal is comprised of three DS-1 level signals (“*multiplex units*”), which are multiplexed into a DS-3 level signal; and where DS-3 signal is

mapped into the payload of VC-3 (see figure 2; col. 7, lines 12-15). Thus, the VC-3 310 is a “frame” containing three DS-1s (“multiplex units”) in its payload, that are multiplexed from a low level into higher level of SDH hierarchy.

d) Appellant also argued that Wakim does not teach “preserving the frame overhead ... multiplex units multiplexed according to a multiplex priority” (see page 13, paragraph 4).

In fact, limitation upon which Applicant relies, i.e. “... multiplex units multiplexed according to a multiplex priority”, is not recited in the rejected claim(s). Note that the claim only recites the overhead is unchanged, e.g. “*preserving the frame overhead*”; but without mentioning any “*multiplex priority*”.

f) Appellant further argued that Wakim does not describe “loading a frame including frame overhead into a concatenated virtual container” (see page 14, paragraph 1). The examiner respectfully disagrees.

In fact, the VC-3 310, which is a “frame” including its synchronous path and associated overhead portion (element 314 in figure 2), e.g. “*frame overhead*”, and its payload portion (element 310 in figure 2), is mapped into a virtual container level-4 ‘VC-4’, then into a STM-4 (element 350 in figure 2) as specified in col. 7, lines 30-42; or into any higher level of “*concatenated virtual container*” as specified in col. 8, lines 30-35. Thus, Wakim does teach the argued limitation(s) “loading a frame including frame overhead into a concatenated virtual container”.

2. **Regarding claims 2-3,**

Appellant argued, Wakim does not teach how the concatenation is performed and how the overhead section of a frame is packed into the payload section of a new frame.

Nevertheless, Appellant does not provide any specific explanation as to the difference between the claimed invention(s) in claims 2 & 3 to that of Wakim. Therefore, the examiner maintains that Wakim does disclose how the concatenation is performed and how the overhead section of the frame is packed into the payload section of a new frame, as set forth in the rejection of claims 2-3 above.

3. **Regarding claims 5-10,**

The argument(s) is moot since the examiner has already withdrawn the rejection under 35 U.S.C. 103(a) of claims 5-10, in the advisory action sent out 07/19/2006, due to the commonly owned statement in the Request for Reconsideration filed on 6/23/2006.

Attachments

Exhibit A: ITU-T Recommendation G.707 (IDS filed on 5/24/2001)

Exhibit B: ITU-T Recommendation G.841 (IDS filed on 5/24/2001)

Exhibit C: ITU-T No. G.707 (IDS filed on 5/24/2001)

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Conclusion

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Lyman

Tri H. Phan
July 5, 2007

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